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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,028	11/15/2001	Jonathan H. Fischer	41	4995

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EXAMINER

AL NAZER, LEITH A

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 11/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/002,028

Applicant(s)

FISCHER, JONATHAN H.

Examiner

Leith A Al-Nazer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.


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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: .

DETAILED ACTION

Drawings

1. Figures 4 and 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Double Patenting

2. Applicant is advised that should claims 1-7 be found allowable, claims 8-14, 16, and 17 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The wording of claims 4 and 11 is unclear, and Examiner is not sure what applicant is attempting to claim.

5. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. ~~The omitted elements are: a current generator.~~

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-6, 8-13, 15, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Link '910 in view of Asano '595.

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With respect to claim 1, 8, 15, 16, and 17, Link shows a driver circuit for an optical source comprising an input stage and an output stage; a current generator circuit; the input stage being configured to include first and second differential pairs (figure 3); the first differential pair (Q5 and Q6) having the differential input data signal (from Q9 and Q10) applied thereto; the second differential pair (Q7 and Q8) receiving as its inputs corresponding outputs of the first differential pair, and being implemented using bipolar devices. Claims 1, 8, 15, and 16 require the first differential pair be implemented using MOS devices. Asano discloses a device using a first differential pair being implemented by MOS devices (81 and 82 of figure 1). Link and Asano are analogous art because they are from a similar problem solving area: laser diode drive methods and circuits. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the MOS devices of Asano with the system as taught or suggested by Link. The motivation for doing so would have been to provide to provide a higher speed circuit using technologically newer devices, such as MOS devices as opposed to bipolar devices. Therefore, it would have been obvious to combine Asano with Link to obtain the invention as specified in claims 1, 8, 15, and 16.

With respect to claim 2 and 9, Link teaches the optical source comprising a laser diode (column 8, lines 40-50).

With respect to claim 3 and 10, Link teaches the output stage comprising a differential pair (Q1 and Q2 in figure 3).

Claim 18 requires the circuit be used in a limiting amplifier system. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to take the systems

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of Link and Asano and specifically state that they could be used in limiting amplifier circuits, as well as driver circuits.

9. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Link '910 in view of Asano '595 as applied to claims 1-6, 8-13, 15, and 16 above, and further in view of Kaminishi '481.

Claims 7 and 14 require the second differential pair comprise SiGe bipolar transistors having the reverse bias constraint. SiGe bipolar transistors are common devices, and are often used in driver circuits as is evidenced by Kaminishi (column 9, lines 1-10). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the SiGe bipolar transistors of Kaminishi with the systems taught or suggested by Link and Asano. The motivation for doing so would have been to obtain a system with the proper reverse current bias characteristics. Therefore, it would have been obvious to combine Kaminishi with Link and Asano to obtain the invention as specified in claims 7 and 14.

Communication Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leith A Al-Nazer whose telephone number is 703-305-2717. The examiner can normally be reached on Monday-Friday 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on 703-308-3098. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-308-7724 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3329.



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November 7, 2002